cation No Internation PCT/US2004/024922

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C07F9/6512 C07F9/653 A61K31/675

According to International Patent Classification (IPC) or to both national classification and IPC

#### **B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07F A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data, WPI Data, PAJ

	ENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the	ne relevant passages	Relevant to claim No.
X	US 4 808 716 A (HOLY ANTONIN 28 February 1989 (1989-02-28) the whole document	ET AL)	1-24
×	US 2003/004345 A1 (CASARA PATE 2 January 2003 (2003-01-02) the whole document	RICK ET AL)	1-24
X	EP 0 269 947 A (BRISTOL MYERS 8 June 1988 (1988-06-08) example 11; compound 40	CO)	1-24
		-/	
	<u> </u>		
X Fur	ther documents are listed in the continuation of box C.	X Patent family members are li	sted in annex.
° Special c	ategories of cited documents :	"T" later document published after the	international filing date
"A" docum	ent defining the general state of the art which is not dered to be of particular relevance	or priority date and not in conflict cited to understand the principle	with the application but
	document but published on or after the international	invention "X" document of particular relevance;	the claimed invention
"E" earlier			
"E" earlier filing	ent which may throw doubts on priority claim(s) or	cannot be considered novel or co involve an inventive step when t	annot be considered to
"E" earlier filing "L" docum which		cannot be considered novel or considered novel	annot be considered to ne document is taken alone the claimed invention
"E" earlier filing "L" docum which citatic "O" docum	ent which may throw doubts on priority claim(s) or I is cited to establish the publication date of another	cannot be considered novel or ci involve an inventive step when ti "Y" document of particular relevance; cannot be considered to involve document is combined with one ments, such combination being or	annot be considered to ne document is taken alone the claimed invention an inventive step when the or more other such docu-
"E" earlier filling "L" docum which citatio "O" docum other "P" docum	ent which may throw doubts on priority claim(s) or a lis clied to establish the publication date of another on or other special reason (as specified) nent referring to an oral disclosure, use, exhibition or means the prior to the international filing date but	cannot be considered novel or considered novel or considered novel or considered to involve document is combined with one	annot be considered to nee document is taken alone the claimed invention an inventive step when the or more other such docupobvious to a person skilled
"E" earlier filling "L" docum which citatic "O" docum other "P" docum later	ent which may throw doubts on priority claim(s) or is clied to establish the publication date of another on or other special reason (as specified) nent referring to an oral disclosure, use, exhibition or means	cannot be considered novel or ci involve an inventive step when ti "Y" document of particular relevance; cannot be considered to involve document is combined with one ments, such combination being of in the art.	annot be considered to ne document is taken alone the claimed invention an inventive step when the or more other such docubivious to a person skilled atent family
"E" earlier filing "L" docum which citatic "O" docum other "P" docum later "	ent which may throw doubts on priority claim(s) or a lis cited to establish the publication date of another on or other special reason (as specified) entireferring to an oral disclosure, use, exhibition or means ent published prior to the international filing date but than the priority date claimed excual completion of the international search	cannot be considered novel or ci involve an inventive step when it "Y" document of particular relevance; cannot be considered to involve document is combined with one ments, such combination being of in the art.  "&" document member of the same particular in the international particular in the international international involves."	annot be considered to ne document is taken alone the claimed invention an inventive step when the or more other such docubivious to a person skilled atent family
"E" earlier filing "L" docum which citatic "O" docum other "P" docum later "	ent which may throw doubts on priority claim(s) or a lis cited to establish the publication date of another on or other special reason (as specified) nent referring to an oral disclosure, use, exhibition or means the prior to the international filing date but than the priority date claimed	cannot be considered novel or convolve an inventive step when to particular relevance; cannot be considered to involve document is combined with one ments, such combination being on the art.  "&" document member of the same particular in the art.	annot be considered to ne document is taken alone the claimed invention an inventive step when the or more other such docubivious to a person skilled atent family
"E" earlier filing "L" docum which citatic "O" docum other "P" docum later "Date of the	ent which may throw doubts on priority claim(s) or a ls cited to establish the publication date of another on or other special reason (as specified) nent referring to an oral disclosure, use, exhibition or means each prior to the international filing date but than the priority date claimed actual completion of the international search  20 January 2005  mailing address of the ISA	cannot be considered novel or ci involve an inventive step when it "Y" document of particular relevance; cannot be considered to involve document is combined with one ments, such combination being of in the art.  "&" document member of the same particular in the international particular in the international international involves."	annot be considered to ne document is taken alone the claimed invention an inventive step when the or more other such docubivious to a person skilled atent family
"E" earlier filing "L" docum which citatic "O" docum other "P" docum later "Date of the	ent which may throw doubts on priority claim(s) or a list cited to establish the publication date of another on or other special reason (as specified) then treferring to an oral disclosure, use, exhibition or means then published prior to the international filing date but than the priority date claimed actual completion of the international search  20 January 2005	cannot be considered novel or convolve an inventive step when to document of particular relevance; cannot be considered to involve document is combined with one ments, such combination being on the art.  *&* document member of the same portion of the international in the art.  *A ** Date of mailing of the international int	annot be considered to ne document is taken alone the claimed invention an inventive step when the or more other such docubivious to a person skilled atent family

Form PCT/ISA/210 (continuation of second sheet) (January 2004)

Internatic catton No
PCT/US2004/024922

		PC1/US2004/024922
C.(Continu	ation) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KIM, CHOUNG UN ET AL: "Synthesis and antiviral activity of (S)-9-[4-hydroxy-3-(phosphonomethoxy)butyl]guanine" JOURNAL OF MEDICINAL CHEMISTRY, 33(6), 1797-800 CODEN: JMCMAR; ISSN: 0022-2623, 1990, XP001204580 the whole document	1-24
P,X	WO 03/087298 A (BABU YARLAGADDA S ; WU MINWAN (US); CHAND POORAN (US); EL-KATTAN YAHYA) 23 October 2003 (2003-10-23) the whole document	1-24
P,X	US 2004/014722 A1 (BABU YARLAGADDA S ET AL) 22 January 2004 (2004-01-22) the whole document	1-24
	•	
	<i>;</i>	

Inter. application No. PCT/US2004/024922

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)	_
This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:	İ
1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:	
2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:	•
3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).	٠,
Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)	•
This International Searching Authority found multiple inventions in this international application, as follows:	
see additional sheet	
As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.	
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.	
3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:	
4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  1 ( part ) - 24 ( part )	
Remark on Protest  The additional search fees were accompanied by the applicant's protest.  No protest accompanied the payment of additional search fees.	:

### FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1(part)-24(part)

Compounds bearing one PY1(Y2H)(Y2H) terminal group (Formula of claim 1 or 11 wherein M2=0 and Rx = H).

2. claims: 1(part)-24(part)

Compounds bearing a terminal group other than one -PY1(Y2H)(Y2H) (Formula of claim 1 or 11 wherein Rx is different than H).

Information on patent family members

Internation No
PCT/US2004/024922

	<del></del>				004/024922 
Patent document cited in search report		Publicatio n date		Patent family member(s)	Publication date
US 4808716	Α	28-02-1989	CS	263951 B1	12-05-1989
		_	ΑT	78259 T	15-08-1992
			ΑU	580151 B2	05-01-1989
			AU	5632886 A	30-10-1986
			CA	1295614 C	11-02-1992
			DE	3686002 D1	20-08-1992
			DE	3686002 T2	17-12-1992
			DK	167886 A	26-10-1986
			EG	18079 A	30-06-1992
			EP	0206459 A2	30-12-1986
			HK	213296 A	06-12-1996
			JP	1749290 C	08-04-1993
			JP	4033798 B	04-06-1992
			JP	61275289 A	05-12-1986
			NO NZ	861621 A ,B, 215925 A	27-10-1986
			NZ 		27-01-1989
US 2003004345	A1	02-01-2003	EP US	0618214 A1 2004068111 A1	05-10-1994 08-04-2004
			AU	681395 B2	28-08-1997
			AU	6516294 A	24-10-1994
			CA	2159451 A1	13-10-1994
			CN	1120338 A ,C	10-04-1996
•			CN	1229084 A	22-09-1999
			DE	69403910 T2	29-01-1998
			EP	0701562 A1	20-03-1996
			ES	2105684 T3	16-10-1997
			FI	954615 A	28-09-1995
			GR	3024788 T3	30-01-1998
			HU	72459 A2	29-04-1996
			JP NO	8508481 T 953878 A	10-09-1996
			NZ	953878 A 263904 A	01-12-1995 26-11-1996
			WO	9422882 A1	13-10-1994
			ÜS	5922696 A	13-10-1994
			ÜS	5817647 A	06-10-1998
			ZA	9402092 A	24-10-1994
EP 0269947	Α	08-06-1988	AT	78485 T	15-08-1992
	- •		ΑU	613592 B2	08-08-1991
			ΑU	8125087 A	19-05-1988
			CA	1339780 C	24-03-1998
			DE	3780581 D1	27-08-1992
			DE	3780581 T3	05-06-1997
			DK	604087 A	19-05-1988
			EG	19346 A	31-01-1995
			EP	0269947 A1	08-06-1988
			ES	2033774 T3	01-04-1993
			GR GR	3005256 T3 3021389 T3	24-05-1993 31-01-1907
			IL	3021389 13 84477 A	31-01-1997 08-12-1995
			JP	2593895 B2	26-03-1995
			JP	63170388 A	14-07-1988
			KR	9509195 B1	16-08-1995
			NZ	222553 A	26-07-1991
			US	5854228 A	29-12-1998
			ÜS	5650510 A	22-07-1997
			PT	86156 A ,B	
			Pi	OOTOO W 'D	01-12-1987

. . .

Information on patent ramily members

Internatio ..... tcation No
PCT/US2004/024922

Patent document cited in search report	Publica date		Patent family member(s)		Publication date
EP 0269947	A	ZA	8708607	A	17-05-1988
WO 03087298	A 23-1	0-2003 AU CA EP WO US	2002365935 2466301 1450809 03087298 2004014722 2005033051	A1 A2 A2 A1	27-10-2003 23-10-2003 01-09-2004 23-10-2003 22-01-2004 10-02-2005
US 2004014722	A1 22-0	1-2004 AU CA EP US WO	2002365935 2466301 1450809 2005033051 03087298	A1 A2 A1	27-10-2003 23-10-2003 01-09-2004 10-02-2005 23-10-2003